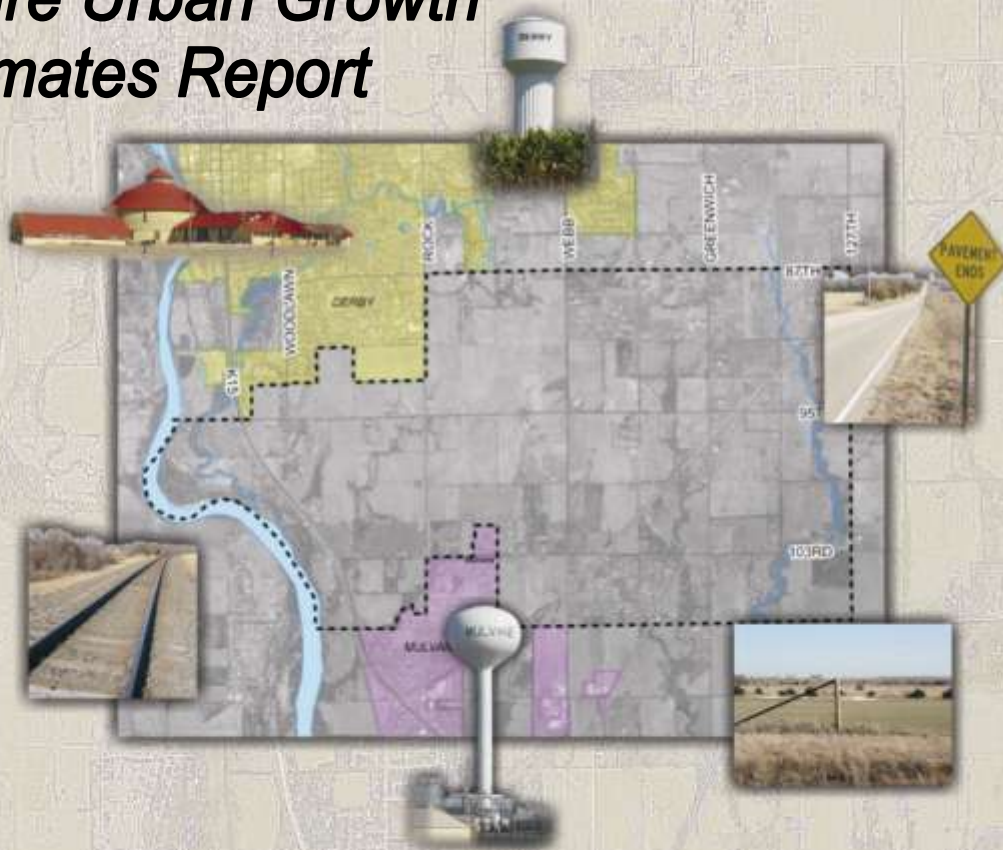


DERBY-MULVANE JOINT AREA PLAN

Appendix B: Future Urban Growth Estimates Report

2010-2030



MAY 2010



Introduction

The Derby-Mulvane Joint Area Plan Future Urban Growth Estimates Report reviews the Derby and Mulvane comprehensive plans allocations for future urban growth in the Derby-Mulvane Plan area, and compares the allocations to the residential and commercial growth projections.

Development Trends Data from 2002 to 2008

During the period 2004 to 2008 four homes were built within the plan area boundaries. Two of these homes were built in 2004 and the other two in 2008. There has been no subdivision activity within the planning boundary that would point to demand for appreciable future residential building activity. However, Derby has seen residential subdivision activity at the edge of the planning area on the north side of 87th Street South within the last five years. Derby has also seen other residential subdivision activity with a half mile of the planning area.

There have been no appreciable commercial construction projects built within the study area boundary from 2004 to 2008. Derby has seen one commercial subdivision on the west side of Rock Road in 2004, and Mulvane has seen two commercial subdivisions within a half mile of the planning area in both 2005 and 2006 along 111th Street South.

2035 Population and Employment Projections

The Wichita-Sedgwick County Metropolitan Area Planning Department (MAPD) 2009 population projection estimates for the Wichita Area Metropolitan Area Planning Organization Area, including all of Sedgwick County, estimates that total population and employment growth will result in 104,050 additional population and 60,400 additional employees for Sedgwick County during the planning period of 2008 to 2035. The City of Derby population is projected to increase approximately two percent a year from 22,058 residents in 2007¹ to 33,750 residents in the year 2035. The number of Mulvane residents is projected to increase at approximately one percent a year from 5,835 residents to 6,800 residents for the same period of time.

Within the Derby and Mulvane Traffic Analysis Zones (roughly resembling all or portions of the future growth areas of each community) the MAPD projects that nearly 800 new homes and nearly 90 new jobs will be created by 2035 (maps displaying the future estimates are available later in this document). Approximately 650 of these new homes could occur within the joint planning area along with approximately 65 of the new jobs.

These estimates are based on Sedgwick County control totals of 582,000 total population and 352,100 total employment for the year 2035. In addition, staff also reviewed community comprehensive plans; performed an analysis of trend history for the previous ten to twenty years; and accounted for changes in the dynamics of growth throughout the county over the previous five to ten years. The growth dynamics are impacted by smaller cities now sharing common city limits with Wichita and other

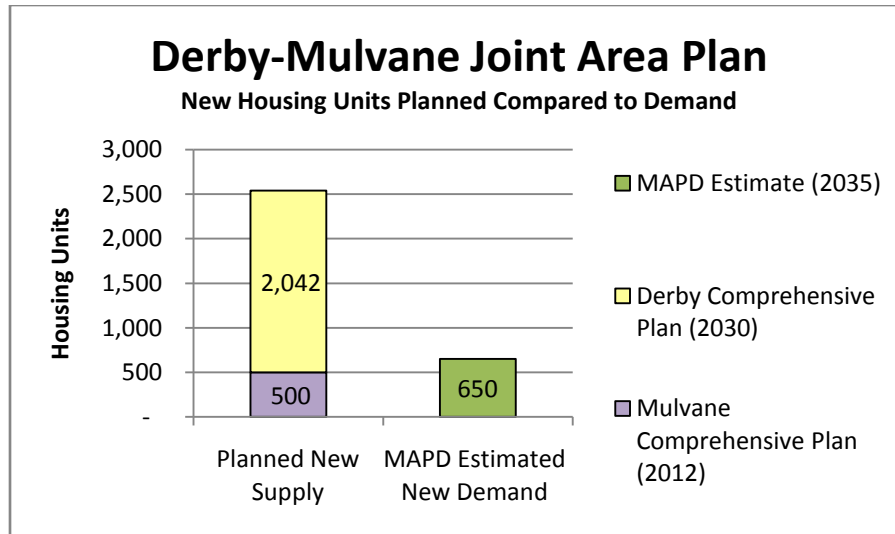
¹ U.S. Census Bureau, Population Estimates Program, 2007 Population Estimates, Table T1

communities; more intense development within the common city limit areas; and the ability of communities to provide water and sewer services to new areas. It is important to note that the Derby area is now sufficiently large enough that it is recognized as a market area in itself for many businesses looking to invest in the region. This can result in growth rates more independent of other regional trends.

Planned Future Urban Development Allocations

The combined Derby and Mulvane comprehensive plans' allocations for future residential development within the plan area are nearly four (4) times the amount of demand anticipated by MAPD population projections to the year 2035. This provides the recommended three (3) times the amount of property needed for the anticipated demand, allowing the flexibility to accommodate properties that are undesirable for development or will be underutilized to the year 2035. However, the property allocated for residential and use beyond the recommended three (3) times the amount needed, could allow for development to leapfrog past undeveloped, but developable, properties of significant size. This could result in substantial costs for extensions of municipal infrastructure and services. The location and sequencing of both developments and infrastructure will be import considerations for local governments.

The estimates for the planned supply and estimated demand for housing units was arrived at using information from the Derby and Mulvane comprehensive plans and from 2035 population estimates created by the MAPD. The Derby and Mulvane comprehensive plans include maps (please refer to maps 3 and 4 in this document) that identify locations for future growth within the plan area. Using this information and average housing densities, we created a rough estimate of the amount of land (in acres) allocated for residential land use. Using this information we were able to compare the amount of land necessary to house the estimated future increase in the plan area population. Later in the document, Table 1: Planned Supply and Estimated Demand for Future Land Uses shows the estimates for the future land use allocations and the estimated demand for future residential land. The figure below shows the comparison of planned housing units supply and estimated future demand in a graphic format.



Future Urban Services

The availability of water and sewer services are some of the most important factors when projecting the future location and growth rates of urban development. Without these services developments are generally limited in density and size due to the ability to treat sewage on-site. Municipalities generally prefer to provide sewer services to areas where gravity flow can be utilized to transport the sewage materials, due to the high cost of installing and operating sewage pumping stations. The boundaries of gravity flow systems are generally the same as area drainage basin boundaries (illustrated on map 5). The majority of the plan area properties drain to the south and west towards Mulvane, shown on the map below. The plan area properties located in the northern portion of the plan area drain slightly north, then west to Derby.

Growth Estimates Analysis

The MAPD staff anticipate that the majority of the plan area will remain in agricultural use by 2030, based on the estimated growth rates of the communities and planned sewer services. The areas most likely to see urban scale developments are those properties located north near the Derby city limits, south near the Mulvane city limits, or west along K-15. The drainage patterns of the area are likely to encourage these development patterns, due to the higher costs to develop properties in the central portion of the plan area. The higher costs are due to the need to either pumping sewage north and connecting into the Derby system, or extending infrastructure from the south in order to connect to the Mulvane system.

The Derby and Mulvane comprehensive plans identify areas for residential developments that could house approximately 2,542 new residents, approximately four times the MAPD estimated population

growth in the plan area. The excess capacity for residential development will accommodate unanticipated changes in market conditions and that some properties will be undevelopable. In addition, it also allows the flexibility to accommodate any residential growth beyond that projected by the MAPD staff. The capacity for residential development will make the location and sequencing of developments important considerations for Derby and Mulvane. The size of the areas identified for future residential development could allow for development to leap-frog past undeveloped properties of considerable size, requiring substantial costs for the extensions of municipal infrastructure and services.

Map 1: MAPD Derby-Mulvane Joint Area 2008 Dwelling Units and 2035 New Dwelling Unit Projection

Derby-Mulvane Joint Area Plan 2008 Dwelling Units & 2035 New Dwelling Unit Projection

Legend

Traffic Analysis Zones

Existing Residential

Flood Zones

0.2 PCT ANNUAL CHANCE FLOOD HAZARD

A, AE, AH, AD

X PROTECTED BY LEVEE

Flood Way

Derby-Mulvane Joint Area Boundary

2035 New Dwelling Unit Projection

Number of Dwelling Units

200 - 2

1 - 5

6 - 25

26 - 50

51 - 75

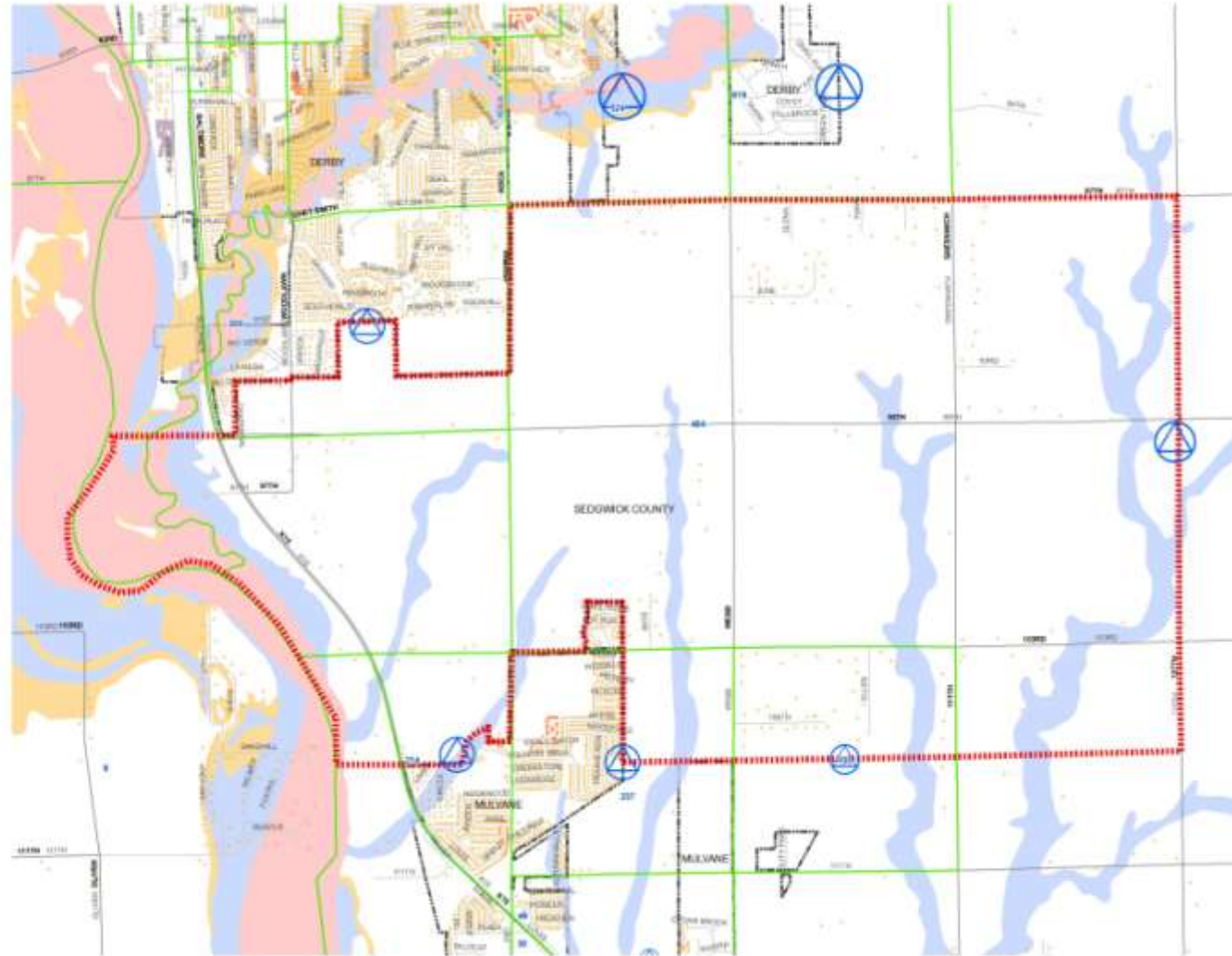
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101 - 250

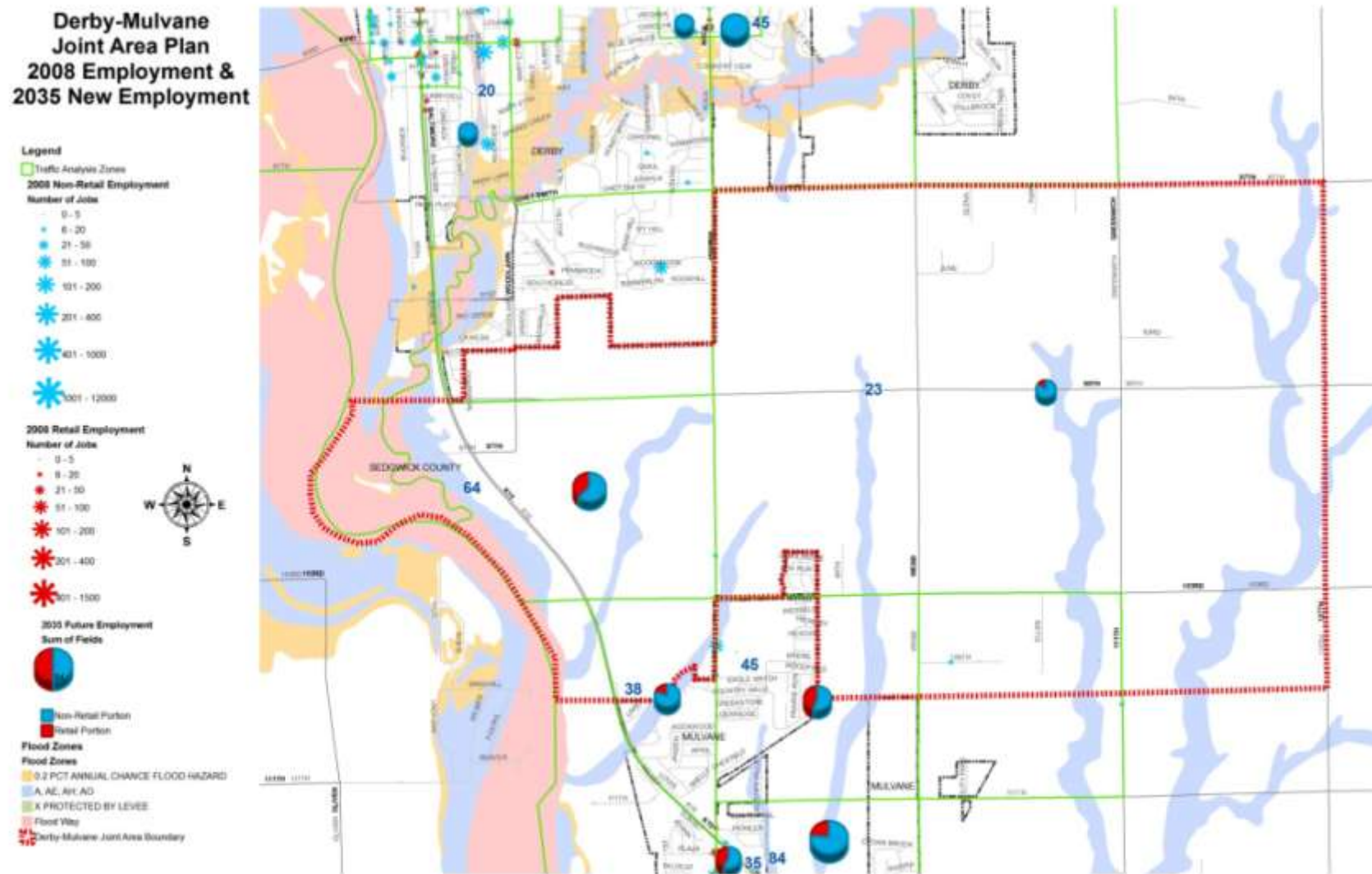
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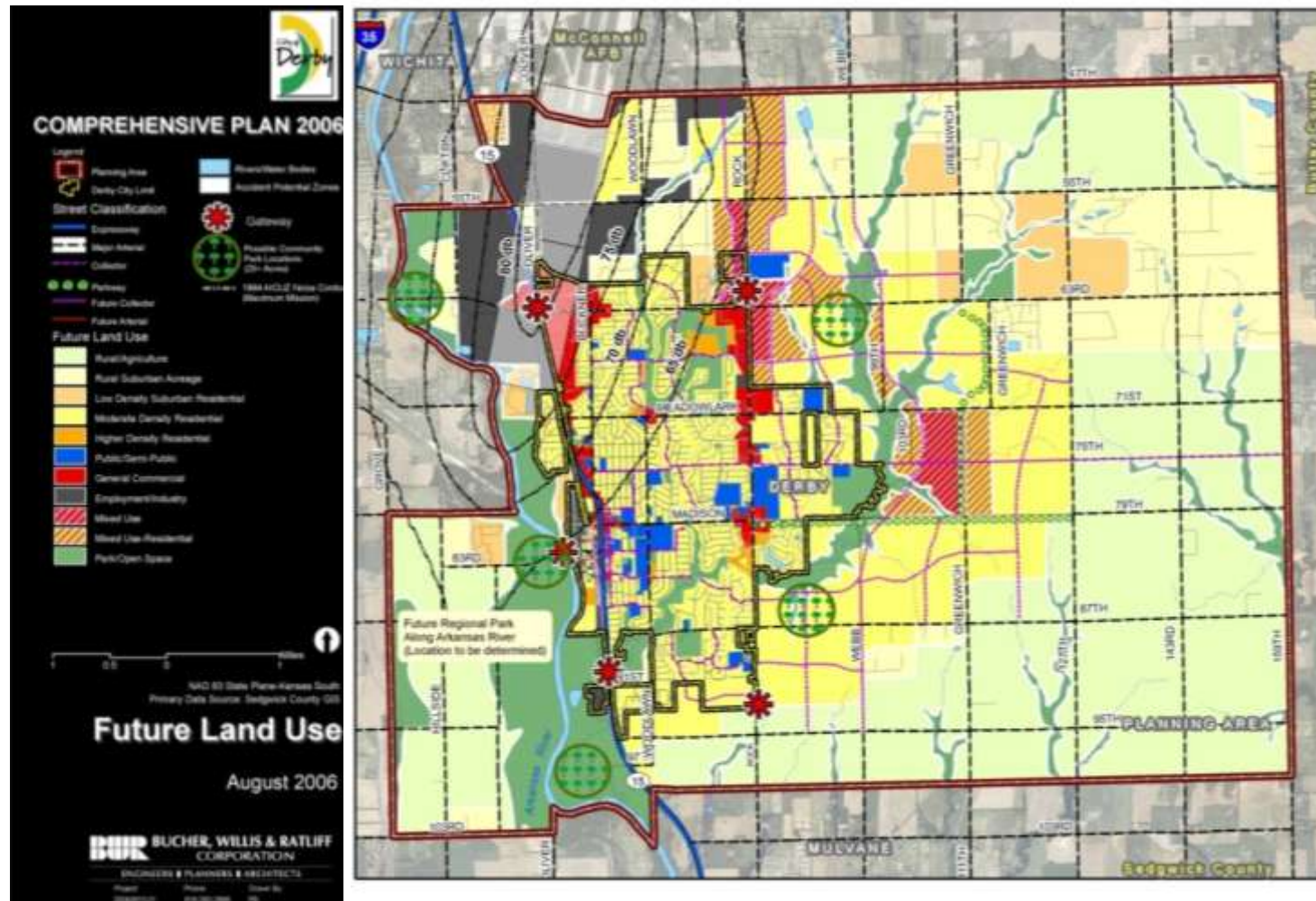
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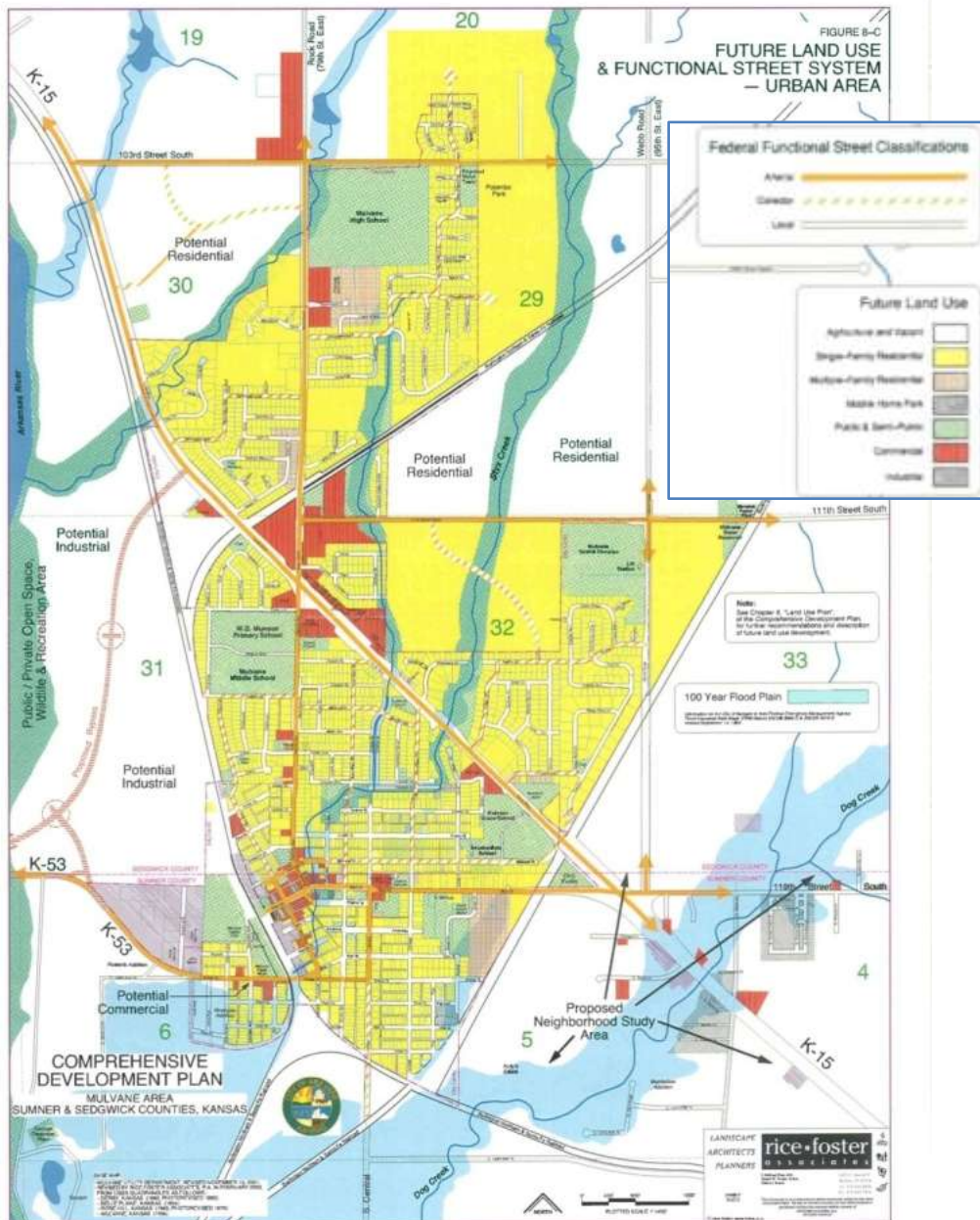
Map 2: Derby-Mulvane Joint Area Plan 2008 Employment and 2035 New Employment



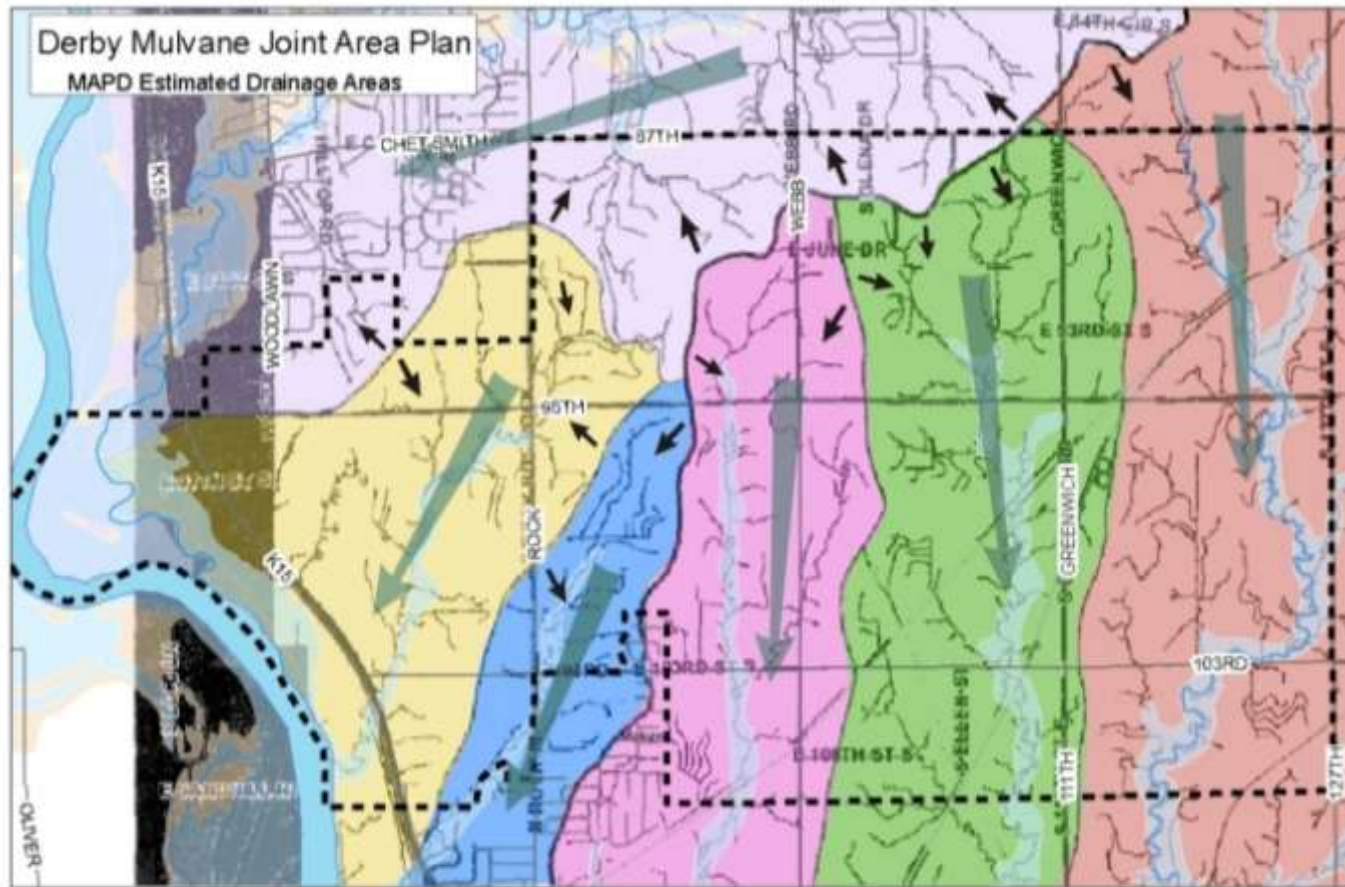
Map 3: Derby Comprehensive Plan Future Land Use Map



Map 4: Mulvane Comprehensive Plan Future Land Use and Functional Street System



Map 5: Derby-Mulvane Joint Area Plan MAPD Estimated Drainage Areas



-  Plan Boundary
-  500 Year Floodplain
-  100 year Floodplain

Software: ArcGIS

Map Data Sources:
City of Wichita
Sedgewick County

Prepared: 4/13/2009

It is understood that while the City of Wichita Data Center Geographical Information Systems Department has no indication and reason to believe that there are inaccuracies in information incorporated in the base map, the Data Center-GIS personnel make no warranty or representation, either expressed or implied, with respect to the information or data.

Table 1: Planned Supply and Estimated Demand for Future Land Uses

Planned Supply and Estimated Demand for Future Land Uses

Estimate Source (Time Horizon)	Comprehensive Plan Land Use	Area (Sq. Ft.)	Acres	Estimated Average Dwelling Units per Acre*	Projected Increase in Units	Vacancy Rate**	Average Household Size***	Estimated Population Increase	Year
Mulvane Comprehensive Plan (2012)	Moderate Density Residential	7,257,528	167	3	500	3%	2.69	1,304	2012
Mulvane Comprehensive Plan (2012)	Commercial	670,029	15						
Total			182						
Derby Comprehensive Plan (2030)	General Commercial	1,545,922	35						
Derby Comprehensive Plan (2030)	Park/Open Space	23,695,985	544						
Derby Comprehensive Plan (2030)	Rural Suburban Acreage	6,626,306	152						
Derby Comprehensive Plan (2030)	Moderate Density Residential	34,205,072	785	2.6	2,042	3%	2.5	4,951	2030
Derby Comprehensive Plan (2030)	Rural/Agriculture	100,579,614	2,309						
Total, Minus Rural/Agricultural Uses			1,517						
MAPD Estimated Population Increase (2035)	None		250	2.6	650	3%	2.5	1,576	2035
MAPD Estimate of Acres Within the 100 Year Floodplain	None		854						
Total Area Needed for MAPD Estimate			1,104						2035
Plan Area			6,124						

* Source: City of Derby Comprehensive Plan or City of Mulvane

** Source: U.S. Census Bureau, Census 2000 - Table H3

*** Source: U.S. Census Bureau, Census 2000 - Table P17 and City of Derby Comprehensive Plan